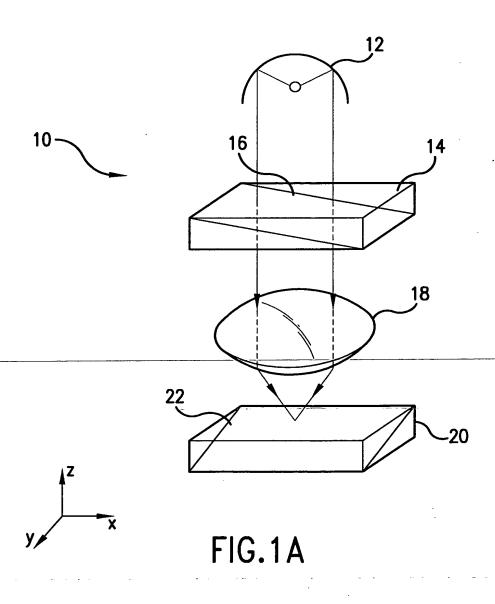
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Appl. No. 09/907,902; Group Art Unit: 2621 Dkt. No. 1875.0300001; Inventor(s): Matthew E. Hansen; Tel: 202/371-2600 Title: System and Method for Characterizing Optical System Using Holographic Reticles

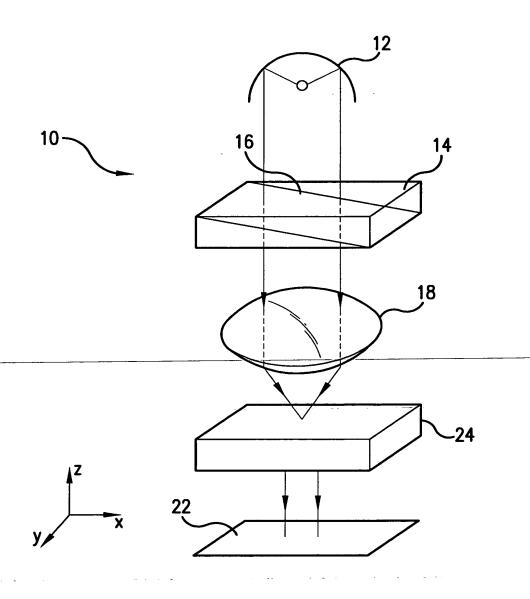
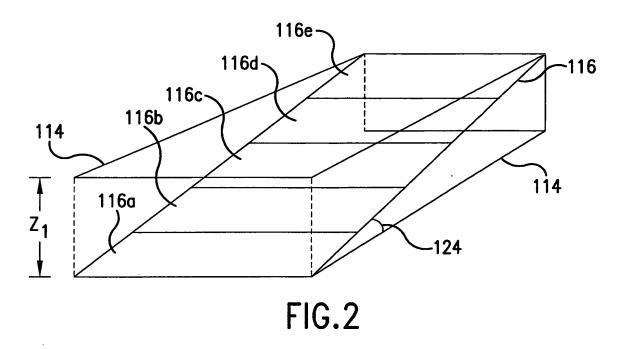
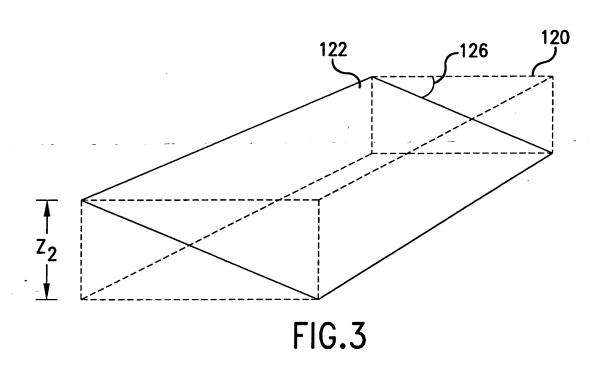


FIG.1B





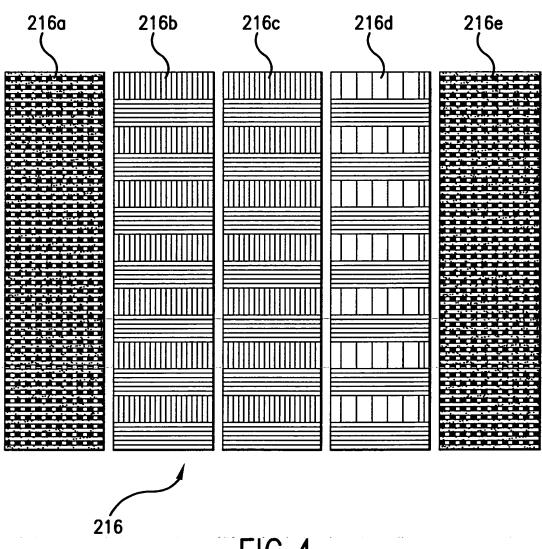
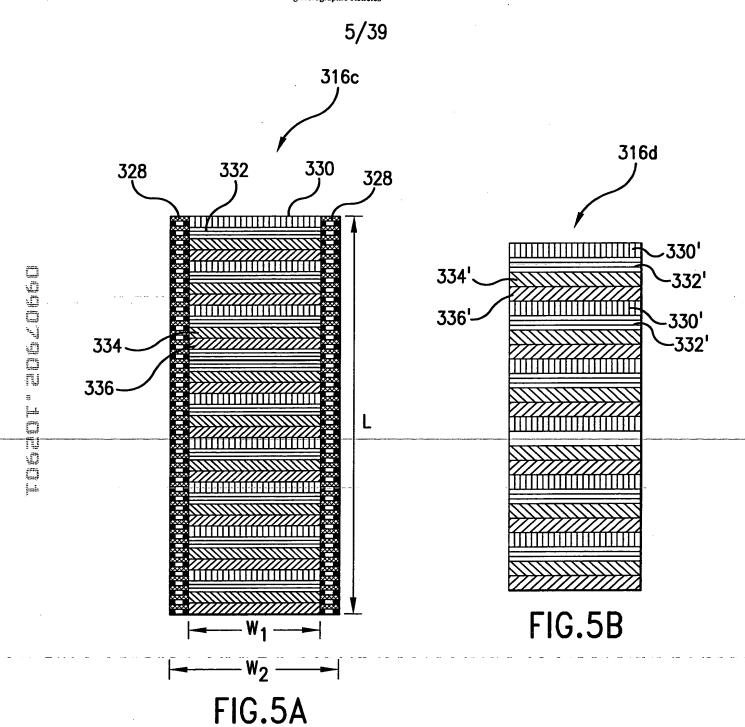


FIG.4

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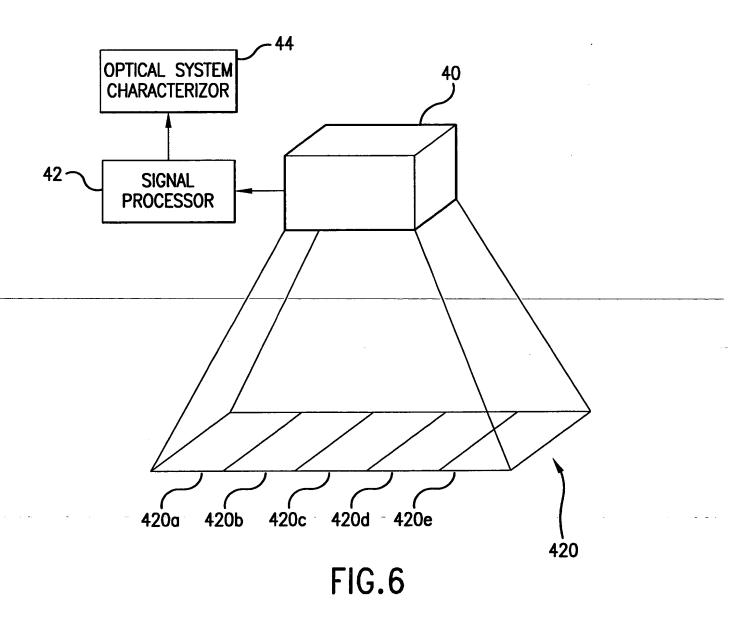


Appl. No. 09/907,902; Group Art Unit: 2621 Dkt. No. 1875.0300001;

Inventor(s): Matthew E. Hansen; Tel: 202/371-2600
Title: System and Method for Characterizing Optical System

Using Holographic Reticles

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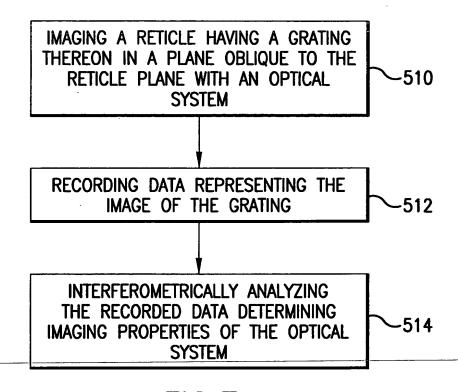
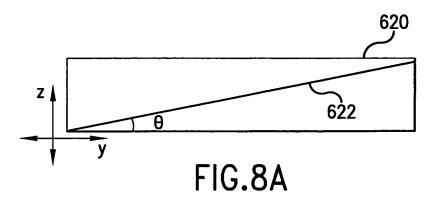
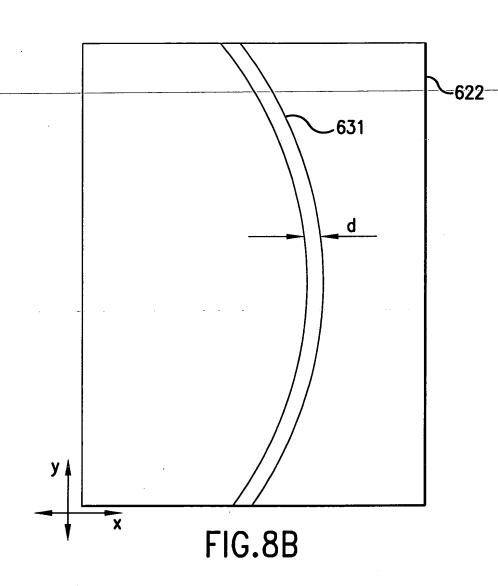
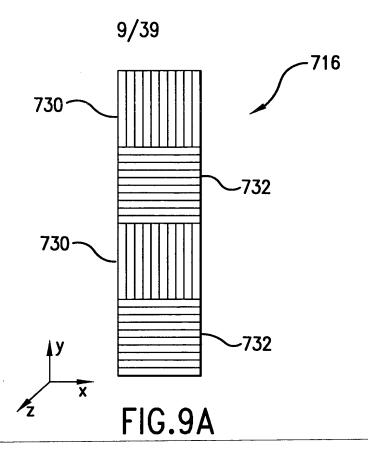


FIG.7







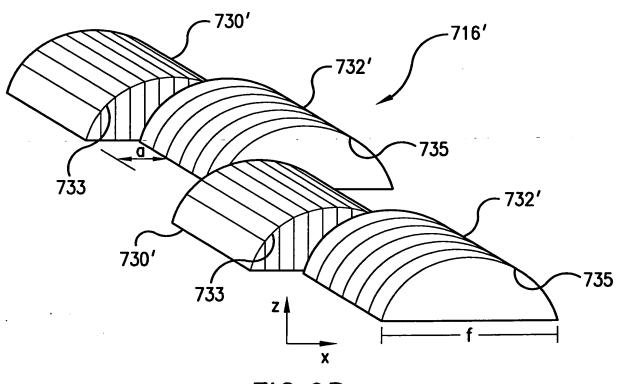
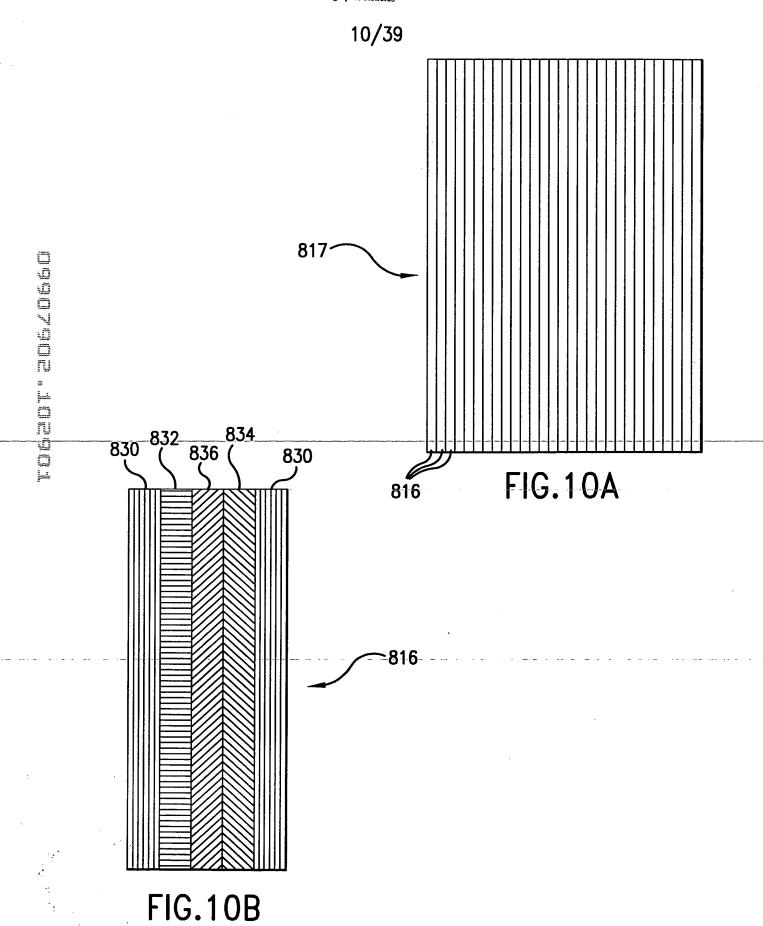
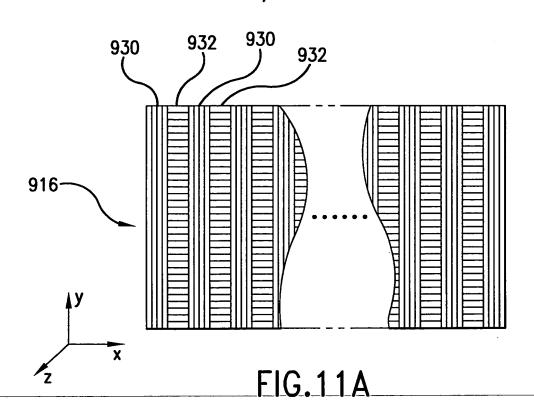


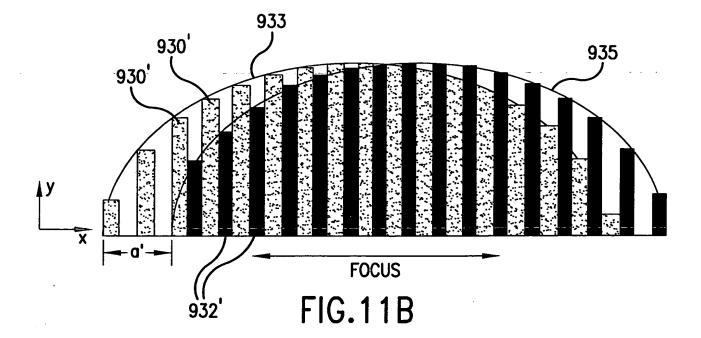
FIG.9B



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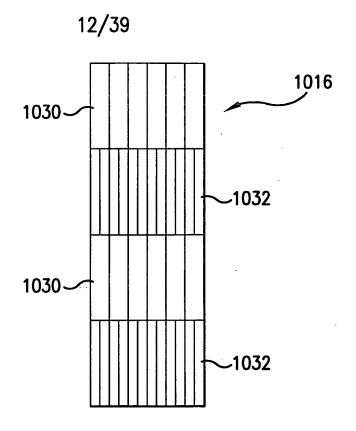


FIG.12

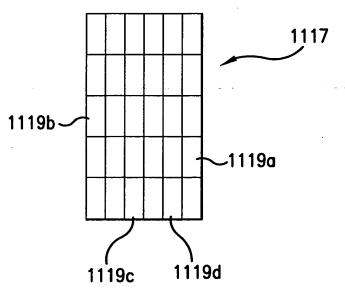


FIG.13

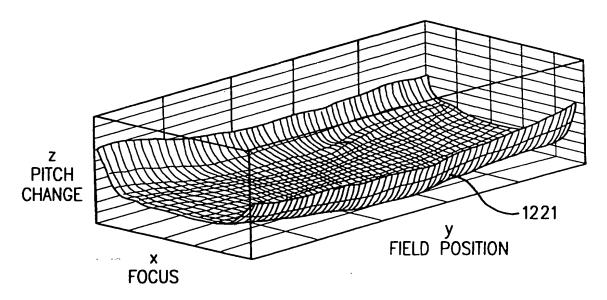


FIG. 14

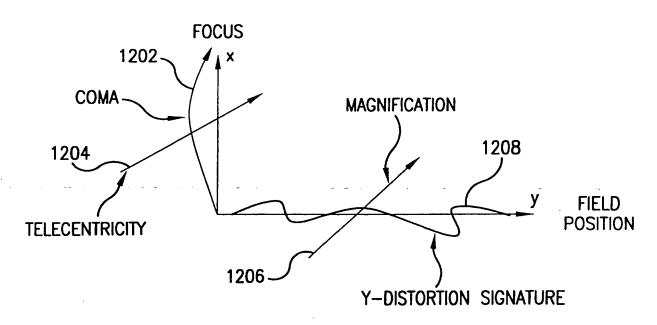


FIG.15



FIG.16A

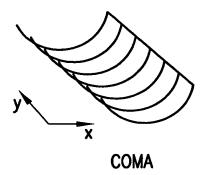


FIG.16B

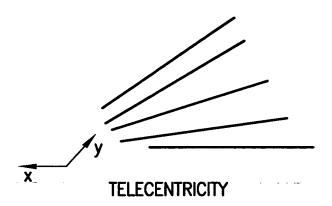
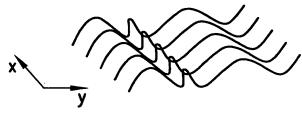


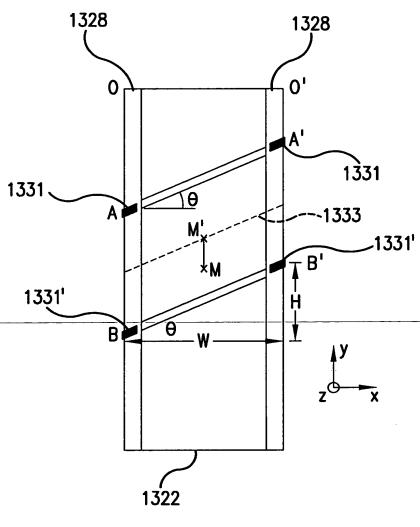
FIG.16C



Y-DISTORTION SIGNATURE

FIG.16D

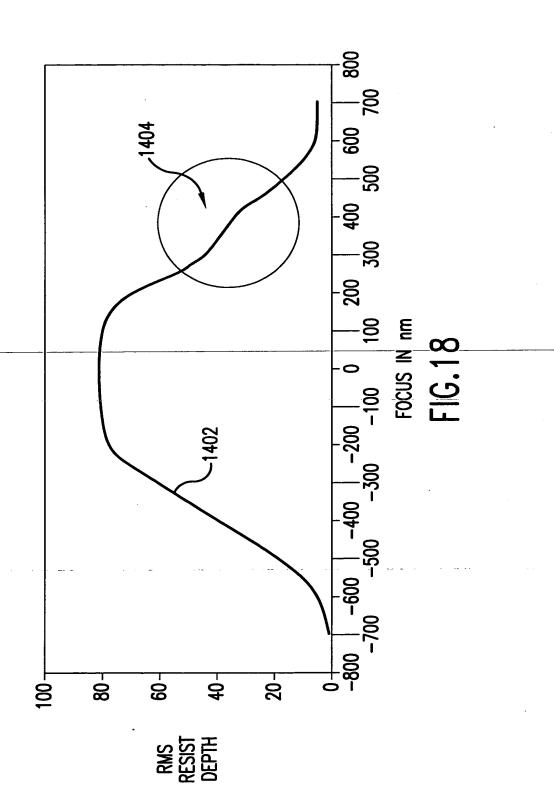
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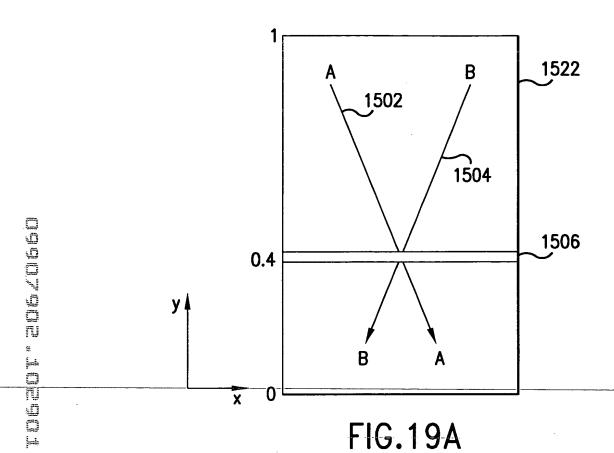
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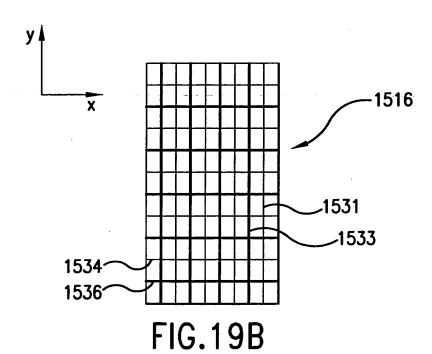
FIG.17

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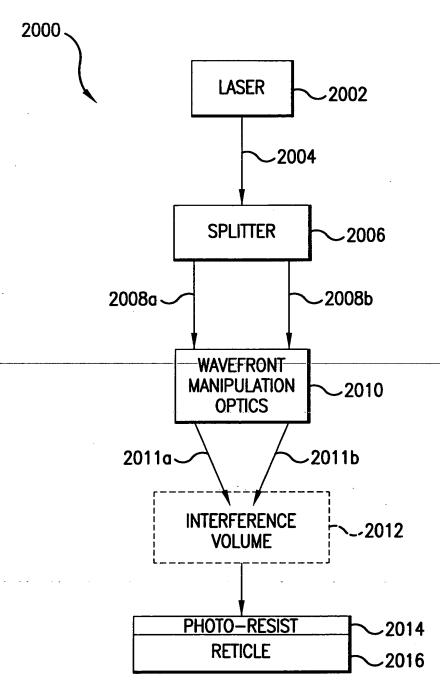


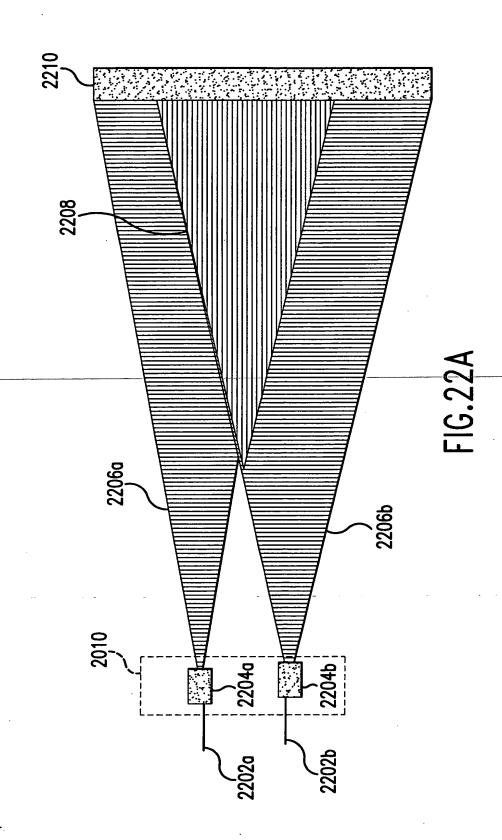
FIG.20

19/39 2100 GENERATE A BEAM OF COHERENT OPTICAL RADIATION 2102 SPLIT THE OPTICAL RADIATION BEAM INTO TWO OR MORE BEAMS 2104 MANIPULATE ONE OR MORE OF THE LASER BEAMS IN ACCORDANCE WITH A DESIRED INTERFERENCE PATTERN 2106 INTERFERE TWO OR MORE OF THE LASER BEAMS TO GENERATE AN INTERFERENCE VOLUME HAVING AN INTERFERENCE PATTERN THAT IS USEFUL FOR TESTING AN OPTICAL SYSTEM 2108 RECORD THE INTERFERENCE PATTERN IN A RECORDING MEDIUM (e.g. PHOTOSENSITIVE FILM, PHOTO—RESIST, SUBSTRATE, RETICLE, CCD, ETC.) 2110 GENERATE A HOLOGRAPHIC TEST RETICLE USING THE RECORDING MEDIUM (e.g. DEVELOP PHOTO-RESIST ON RETICLE BLANK) 2112 TEST AN OPTICAL SYSTEM USING THE RESULTING HOLOGRAPHIC RETICLE

FIG.21

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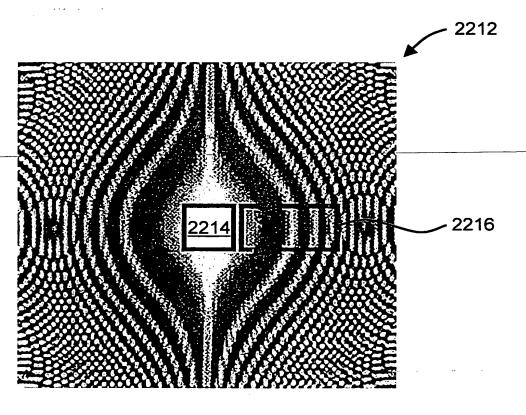
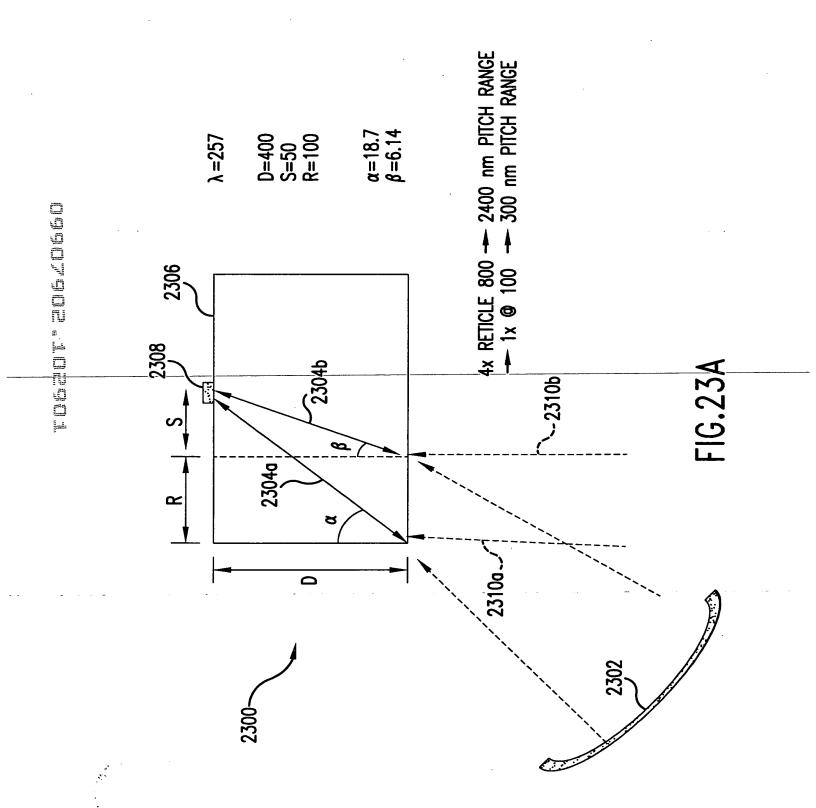
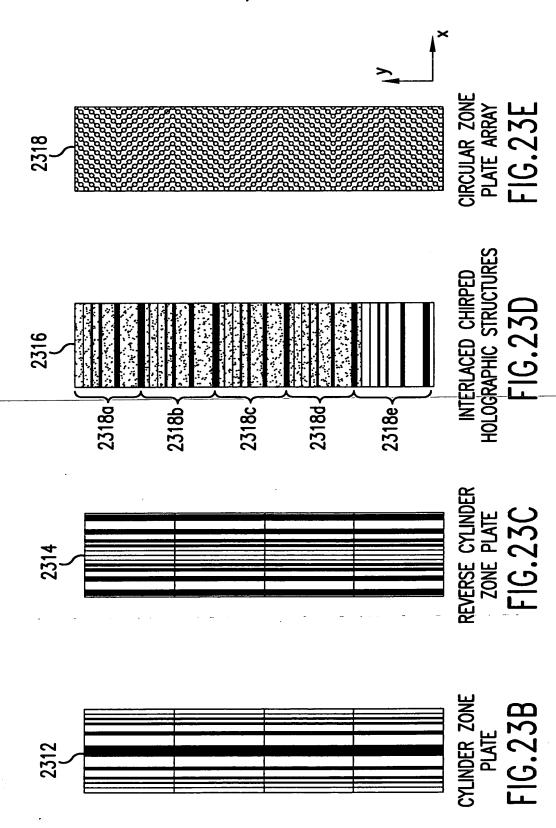


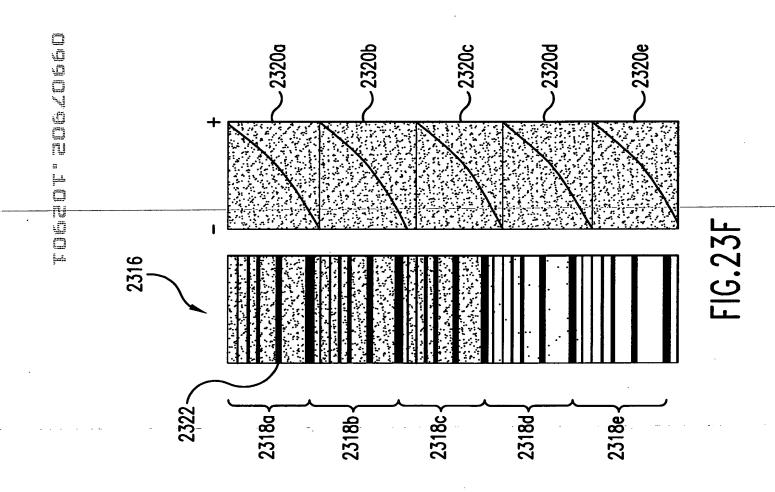
FIG.22B



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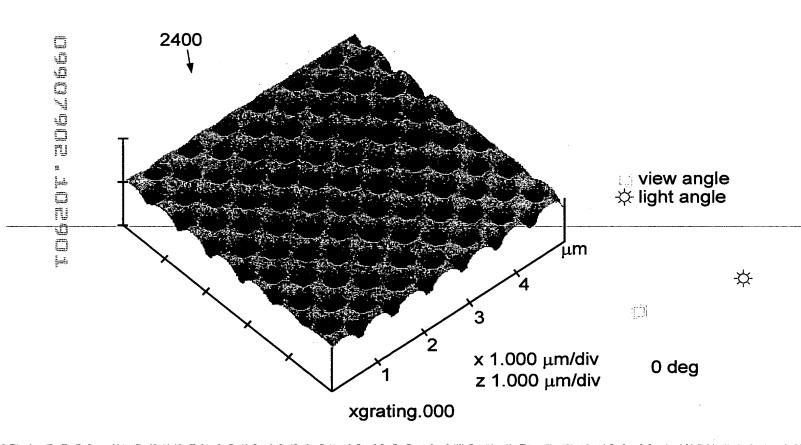


FIG.24

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Appl. No. 09/907,902; Group Art Unit: 2621 Dkt. No. 1875.0300001; Inventor(s): Matthew E. Hansen; Tel: 202/371-2600 Title: System and Method for Characterizing Optical System Using Holographic Reticles

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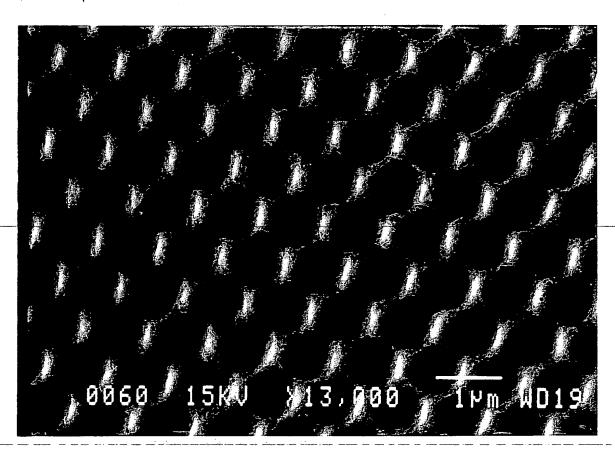


FIG.25

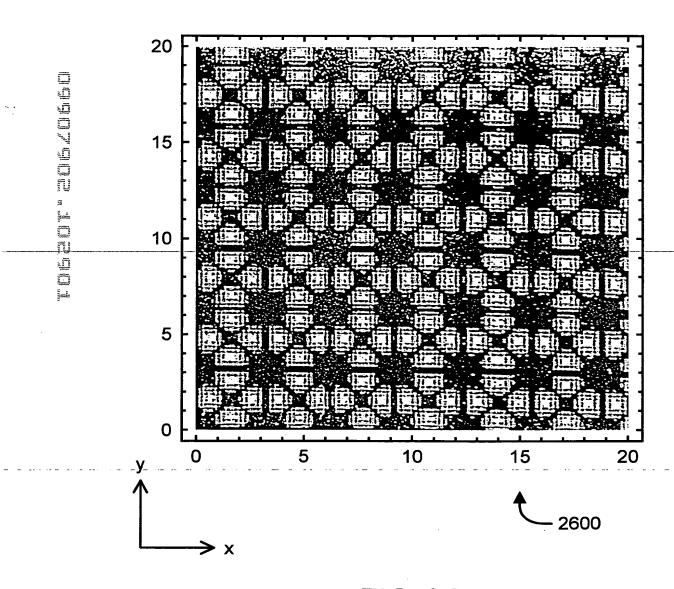
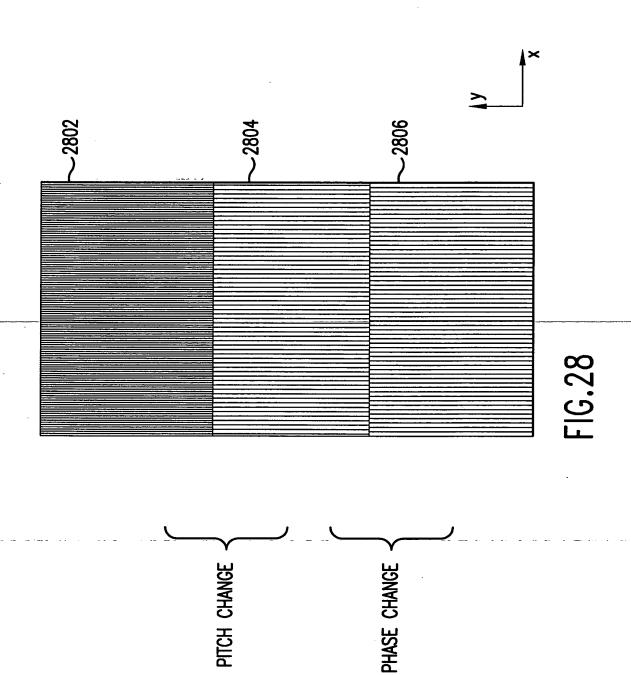


FIG.26

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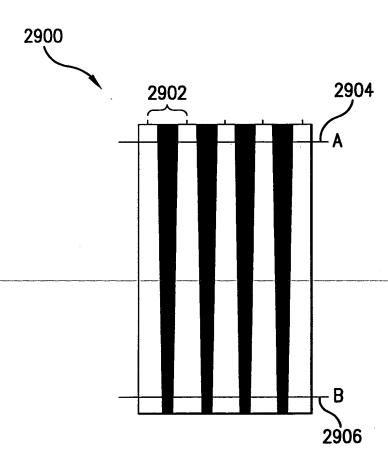
FIG.27

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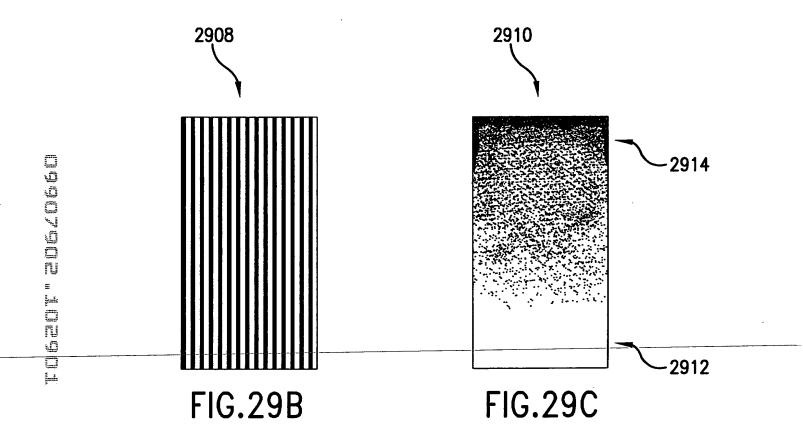
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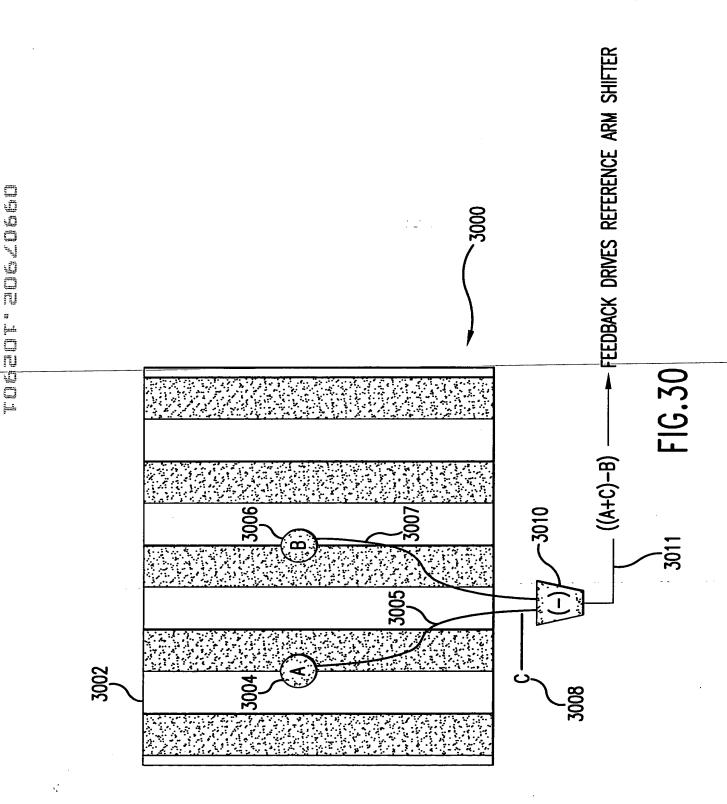


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FIG.29A

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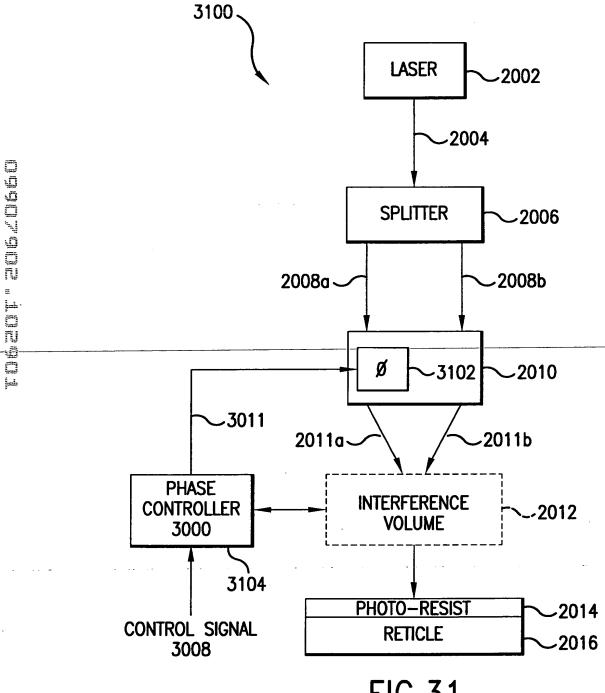


FIG.31

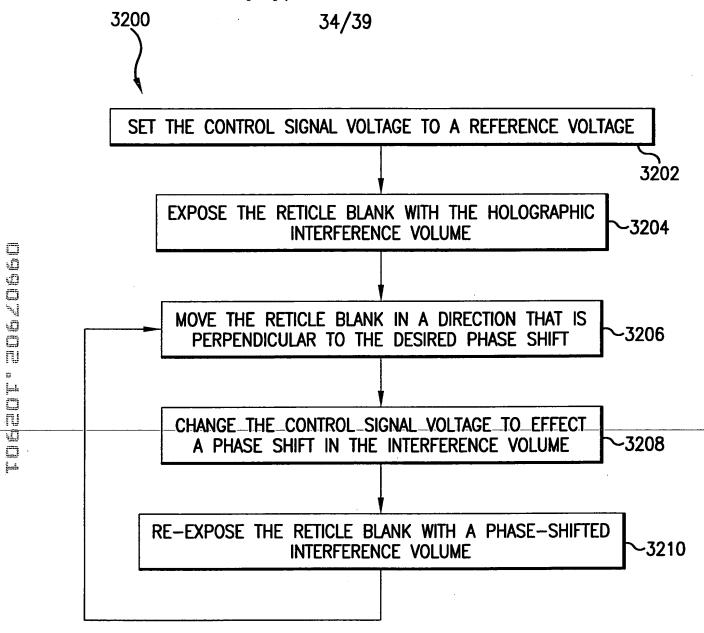
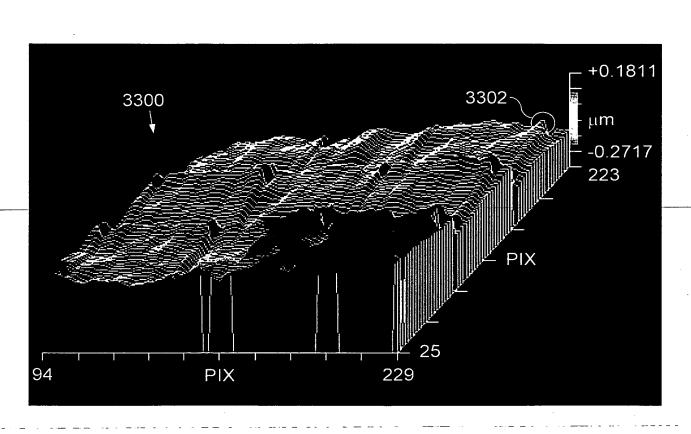


FIG.32

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Appl. No. 09/907,902; Group Art Unit: 2621 Dkt. No. 1875.0300001; Inventor(s): Matthew E. Hansen; Tel: 202/371-2600 Title: System and Method for Characterizing Optical System Using Holographic Reticles

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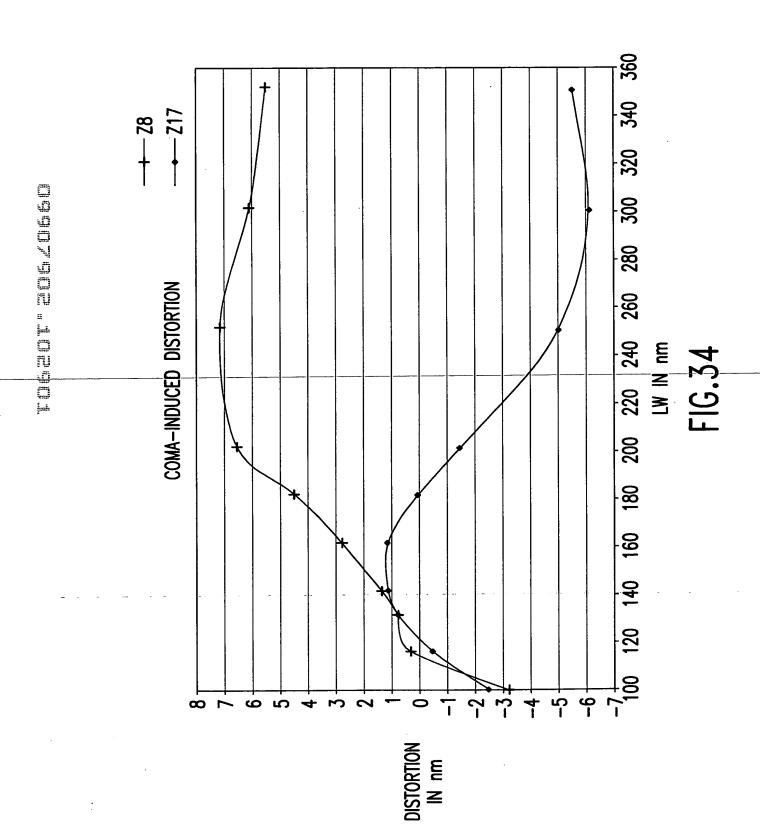


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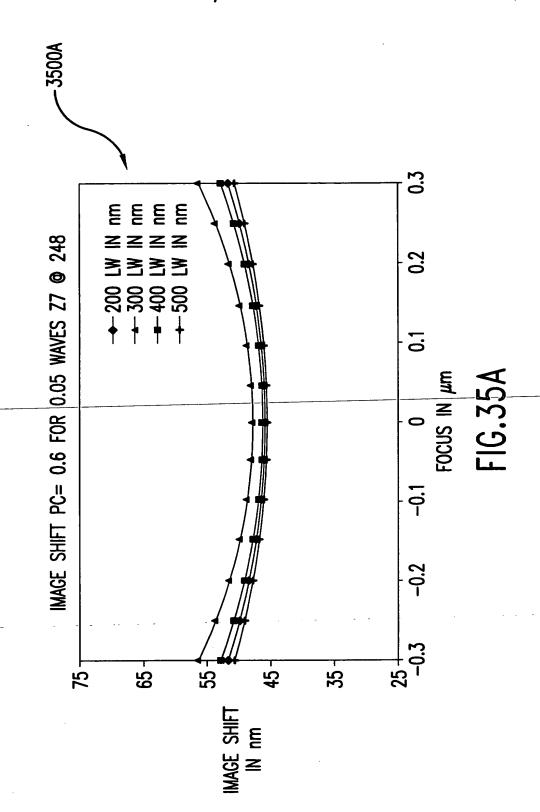
FIG.33

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Appl. No. 09/907,902; Group Art Unit: 2621 Dkt. No. 1875.0300001; Inventor(s): Matthew E. Hansen; Tel: 202/371-2600 Title: System and Method for Characterizing Optical System Using Holographic Reticles

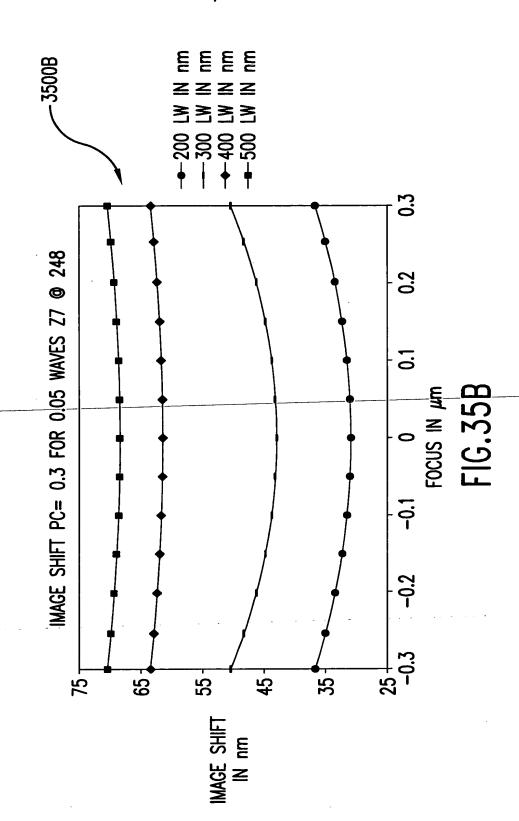


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	DIFFRACTION ORDER			
LINEWIDTH	1ST	2ND	3RD	4TH
100 nm	a			
200 nm	b	a		
300 nm	С		a	
400 nm	d	b		a
600 nm	е	С		
800 nm		d	b	,
900 nm			С	
1000 nm				b
1200 nm		е	d	С

FIG.36